
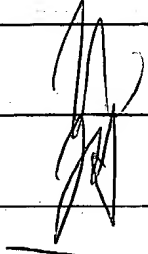


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|---|--------------|--|----------|----------------------|----------------------------|----------|----------------------------|----|
| U.S. Department of Commerce, Patent and Trademark Office  |              |  |          |                      | Atty Docket No.            |          | Serial No.                 |    |
|   |              |  |          |                      | M-11522 US                 |          | Not assigned yet           |    |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT   |              |  |          |                      | Applicants                 |          |                            |    |
| (Use several sheets if necessary)   |              |  |          |                      | Demaray, Richard E. et al. |          |                            |    |
|   |              |  |          |                      | Filing Date                |          | Group                      |    |
|   |              |  |          |                      | Herewith                   |          | Not assigned               |    |
| U.S. Patent Documents   |              |  |          |                      |                            |          |                            |    |
| *Examiner Initial   |              | Document Number  | Date     | Name                 | Class                      | Subclass | Filing Date If Appropriate |    |
|   | AA           | 5,107,538  | 4/21/92  | Benton et al.        | 385                        | 130      |                            |    |
|   | AB           | 5,119,460  | 6/2/92   | Bruce et al.         | 385                        | 142      |                            |    |
|   | AC           | 5,206,925  | 4/27/93  | Nakazawa et al.      | 385                        | 142      |                            |    |
|   | AD           | 5,252,194  | 10/12/93 | Demaray et al.       | 204                        | 298.2    |                            |    |
|   | AE           | 5,303,319  | 4/12/94  | Ford et al.          | 385                        | 131      |                            |    |
|   | AF           | 5,381,262  | 1/10/95  | Arima et al.         | 359                        | 341      |                            |    |
|   | AG           | 5,427,669  | 6/27/95  | Drummond             | 204                        | 298.2    |                            |    |
|   | AH           | 5,475,528  | 12/12/95 | LaBorde              | 359                        | 341      |                            |    |
|   | AI           | 5,483,613  | 1/9/96   | Bruce et al.         | 385                        | 129      |                            |    |
|   | AJ           | 5,555,127  | 9/10/96  | Abdelkader et al.    | 359                        | 341      |                            |    |
|   | AK           | 5,563,979  | 10/8/96  | Bruce et al.         | 385                        | 142      |                            |    |
| Foreign Patent Documents  |              |  |          |                      |                            |          |                            |    |
|   |              |  |          |                      |                            |          | Translation                |    |
|   |              | Document   | Date     | Country              | Class                      | Subclass | Yes                        | No |
|   | AL           | WO 00/21898  | 4/20/00  | PCT                  | C03C                       | 13/04    | X                          |    |
|   | AM           | WO 00/22742  | 4/20/00  | PCT                  | G02B                       | 6/26     |                            |    |
|   | AN           | EP 0867 985A1  | 9/30/98  | Europe               | H01S                       | 3/06     |                            |    |
|   | AO           |  |          |                      |                            |          |                            |    |
|   | AP           |  |          |                      |                            |          |                            |    |
| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)  |              |  |          |                      |                            |          |                            |    |
|   | AQ           | Asghari et al., "ASOC - A Manufacturing Integrated Optics Technology," Part of the SPIE Conference on Integrated Optics Devices III, SPIE Vol. 3620, pages 252-262 (January 1999).       |          |                      |                            |          |                            |    |
|   | AR           | Bestwick, T., "ASOC silicon integrated optics technology," Part of the SPIE Conferences on Photonics Packaging and Integration, SPIE Vol. 3631, pages 182-190 (January 1999).            |          |                      |                            |          |                            |    |
|   | AS           | Choi et al., "Er-Al-codoped silicate planar light waveguide-type amplifier fabricated by radio-frequency sputtering," Optics Letters, Vol. 25, No. 4, pages 263-265 (February 15, 2000). |          |                      |                            |          |                            |    |
| Examiner  | JOHN HOFFMAN |  |          | Date Considered 2-04 |                            |          |                            |    |
| *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant. |              |  |          |                      |                            |          |                            |    |

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| U.S. Department of Commerce, Patent and Trademark Office   |               |   |                     |                       | Atty Docket No.            |                | Serial No.                 |    |
|  |               |   |                     |                       | M-11522 US                 |                | Not assigned yet           |    |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT  |               |   |                     |                       | Applicants                 |                |                            |    |
| (Use several sheets if necessary)  |               |   |                     |                       | Demaray, Richard E. et al. |                |                            |    |
|  |               |   |                     |                       | Filing Date                |                | Group                      |    |
|  |               |   |                     |                       | Herewith                   |                | Not assigned yet           |    |
| U.S. Patent Documents  |               |   |                     |                       |                            |                |                            |    |
| *Examiner Initial  |               | Document Number   | Date                | Name                  | Class                      | Subclass       | Filing Date If Appropriate |    |
|  | AA            | 5,565,071   | 10/15/96            | Demaray et al.        | 204                        | 192.12         |                            |    |
|  | AB            | 5,603,816   | 2/18/97             | Demaray et al.        | 204                        | 298.07         |                            |    |
|  | AC            | 5,613,995   | 3/25/97             | Bhandarkar et al.     | 65                         | 384            |                            |    |
|  | AD            | 5,718,813   | 2/17/98             | Drummond et al.       | 204                        | 192.12         |                            |    |
|  | AE            | 5,719,976   | 2/17/98             | Henry et al.          | 385                        | 50             |                            |    |
|  | AF            | 5,841,931   | 11/24/98            | Foresi et al.         | 385                        | 131            |                            |    |
|  | AG            | 5,847,865   | 12/8/98             | Gopinath et al.       | 359                        | 343            |                            |    |
|  | AH            | 5,855,744   | 1/5/99              | Halsey et al.         | 204                        | 192.12         |                            |    |
|  | AI            | 5,900,057   | 5/4/99              | Buchal et al.         | 117                        | 109            |                            |    |
|  | <del>AJ</del> | <del>5,996,491</del>  | <del>10/12/99</del> | <del>DiGiovanni</del> | <del>385</del>             | <del>127</del> | <del></del>                |    |
| AK   | 6,001,224     | 12/14/99  | Drummond et al.     | 204                   | 192.12                     |                |                            |    |
| Foreign Patent Documents   |               |   |                     |                       |                            |                |                            |    |
|  |               |   |                     |                       |                            |                | Translation                |    |
|  |               | Document  | Date                | Country               | Class                      | Subclass       | Yes                        | No |
|  | AL            |   |                     |                       |                            |                |                            |    |
|  | AM            |   |                     |                       |                            |                |                            |    |
|  | AN            |   |                     |                       |                            |                |                            |    |
|  | AO            |   |                     |                       |                            |                |                            |    |
|  | AP            |   |                     |                       |                            |                |                            |    |
| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)   |               |   |                     |                       |                            |                |                            |    |
|  | AQ            | Horst et al., "Compact, Tunable Optical Devices in Silicon-Oxynitride Wave Guide Technology," IBM Research Division, 3 pages (1999).  |                     |                       |                            |                |                            |    |
|  | AR            | <del>Hübner, J. and Guldberg-Kjaer, S., "Planar Er- and Yb-Doped Amplifiers and Lasers," COM Technical University of Denmark, 10<sup>th</sup> European Conf. On Integrated Optics, Session WeB2, pages 71-74 (2001).</del><br><i>Date! is it Prior Art?</i> |                     |                       |                            |                |                            |    |
|  | AS            | Kato et al., "Recent progress on PLC hybrid integration," Part of the SPIE Conference on Optoelectric Integrated Circuits III," SPIE. Vol. 3631, pages 28-36 (January 1999).  |                     |                       |                            |                |                            |    |
| Examiner   |               | JOHN HOFFMAN  |                     | Date Considered       |                            | 2-6-01         |                            |    |
| *EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant. |               |   |                     |                       |                            |                |                            |    |

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|  |    |  |         |                 | M-11522 US                 |              | Not assigned yet           |    |
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| (Use several sheets if necessary)  |    |  |         |                 | Demaray, Richard E. et al. |              |                            |    |
|  |    |  |         |                 | Filing Date                |              | Group                      |    |
|  |    |  |         |                 | Herewith                   |              | Not assigned yet           |    |
| U.S. Patent Documents  |    |  |         |                 |                            |              |                            |    |
| *Examiner Initial  |    | Document Number  | Date    | Name            | Class                      | Subclass     | Filing Date If Appropriate |    |
|   | AA | 6,024,844  | 2/15/00 | Drummond et al. | 204                        | 192.12       |                            |    |
|  | AB | 6,157,765  | 12/5/00 | Bruce et al.    | 385                        | 129          |                            |    |
|  | AC | 5,831,262  | 11/3/98 | Greywall et al. | 250                        | 227.14       |                            |    |
|  | AD |  |         |                 |                            |              |                            |    |
|  | AE |  |         |                 |                            |              |                            |    |
|  | AF |  |         |                 |                            |              |                            |    |
|  | AG |  |         |                 |                            |              |                            |    |
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| Foreign Patent Documents   |    |  |         |                 |                            |              |                            |    |
|  |    |  |         |                 |                            |              | Translation                |    |
|  |    | Document   | Date    | Country         | Class                      | Subclass     | Yes                        | No |
|  | AL |  |         |                 |                            |              |                            |    |
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|  | AP |  |         |                 |                            |              |                            |    |
| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)   |    |  |         |                 |                            |              |                            |    |
|   | AQ | Ladouceur, F. et al., "Effect of side wall roughness in buried channel waveguides," IEEE Proc., Vol. 141, pages 242-248 (August 1994).   |         |                 |                            |              |                            |    |
|  | AR | Laurent-Lund, C. et al., "PECVD Grown Multiple Core Planar Waveguides with Extremely Low Interface Reflections and Losses," IEEE Photonics Technology Letters Vol. 10, No. 10, pages 1431-1433 (October 1998).               |         |                 |                            |              |                            |    |
|  | AS | Lee, Kevin K. et al., "Effect of size and roughness on light transmission in a Si/SiO <sub>2</sub> waveguide: Experiments and model," <i>American Institute of Physics</i> , pages 1617-1619 (2000). <i>INcomplete date!</i> |         |                 |                            |              |                            |    |
| Examiner   |    | JOHN HOFFMAN   |         | Date Considered |                            | 12-4-01 2-04 |                            |    |
| *EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant. |    |  |         |                 |                            |              |                            |    |

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| U.S. Department of Commerce, Patent and Trademark Office |  |  |  |  | Atty Docket No.            |  | Serial No.       |  |
|  |  |  |  |  | M-11522 US                 |  | Not assigned yet |  |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT            |  |  |  |  | Applicants                 |  |                  |  |
| (Use several sheets if necessary)                        |  |  |  |  | Demaray, Richard E. et al. |  |                  |  |
|  |  |  |  |  | Filing Date                |  | Group            |  |
|  |  |  |  |  | Herewith                   |  | Not assigned yet |  |

| U.S. Patent Documents |    |                 |      |      |       |          |                            |
|-----------------------|----|-----------------|------|------|-------|----------|----------------------------|
| *Examiner Initial     |    | Document Number | Date | Name | Class | Subclass | Filing Date If Appropriate |
|                       | AA |                 |      |      |       |          |                            |
|                       | AB |                 |      |      |       |          |                            |
|                       | AC |                 |      |      |       |          |                            |
|                       | AD |                 |      |      |       |          |                            |
|                       | AE |                 |      |      |       |          |                            |
|                       | AF |                 |      |      |       |          |                            |
|                       | AG |                 |      |      |       |          |                            |
|                       | AH |                 |      |      |       |          |                            |
|                       | AI |                 |      |      |       |          |                            |
|                       | AJ |                 |      |      |       |          |                            |
|                       | AK |                 |      |      |       |          |                            |

| Foreign Patent Documents |    |          |      |         |       |          |             |    |
|--------------------------|----|----------|------|---------|-------|----------|-------------|----|
|                          |    |          |      |         |       |          | Translation |    |
|                          |    | Document | Date | Country | Class | Subclass | Yes         | No |
|                          | AL |          |      |         |       |          |             |    |
|                          | AM |          |      |         |       |          |             |    |
|                          | AN |          |      |         |       |          |             |    |
|                          | AO |          |      |         |       |          |             |    |
|                          | AP |          |      |         |       |          |             |    |

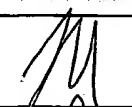

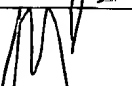
  


| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.) |   |
|--|---|
| AQ   | Marques, P.V.S. et al., "Planar Silica-on-Silicon Waveguide Lasers Based in Two Layer Core Devices," 10 <sup>th</sup> European Conference on Integrated Optics, Session WeB2, pages 79-82 (2001). <i>IN complete Date</i>                             |
| AR   | Ohkubo et al., "Polarization-Insensitive Arrayed-Waveguide Grating Using Pure Si <sub>3</sub> N <sub>4</sub> Cladding," Fifth Optoelectronics and Communication Conference (OECC 2000) Technical Digest, 2 pages (July 2000). <i>IN complete date</i> |
| AS   | Ono et al., "Design of a Low-loss Y-branch Optical Waveguide," Fifth Optoelectronic and Communications Conference (OECC 2000) Technical Digest, 2 pages (July 2000). <i>IN complete date</i>  |

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|------------------------------|-----------------------------|
| Examiner <b>JOHN HOFFMAN</b> | Date Considered <b>2-04</b> |
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|---|----|---|------|--------------------------|----------------------------|----------|----------------------------|----|
| U.S. Department of Commerce, Patent and Trademark Office  |    |   |      |                          | Atty Docket No.            |          | Serial No.                 |    |
|   |    |   |      |                          | M-11522 US                 |          | Not assigned yet           |    |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT   |    |   |      |                          | Applicants                 |          |                            |    |
| (Use several sheets if necessary)   |    |   |      |                          | Demaray, Richard E. et al. |          |                            |    |
|   |    |   |      |                          | Filing Date                |          | Group                      |    |
|   |    |   |      |                          | Herewith                   |          | Not assigned yet           |    |
| U.S. Patent Documents   |    |   |      |                          |                            |          |                            |    |
| *Examiner Initial   |    | Document Number   | Date | Name                     | Class                      | Subclass | Filing Date If Appropriate |    |
|   | AA |   |      |                          |                            |          |                            |    |
|   | AB |   |      |                          |                            |          |                            |    |
|   | AC |   |      |                          |                            |          |                            |    |
|   | AD |   |      |                          |                            |          |                            |    |
|   | AE |   |      |                          |                            |          |                            |    |
|   | AF |   |      |                          |                            |          |                            |    |
|   | AG |   |      |                          |                            |          |                            |    |
|   | AH |   |      |                          |                            |          |                            |    |
|   | AI |   |      |                          |                            |          |                            |    |
|   | AJ |   |      |                          |                            |          |                            |    |
|   | AK |   |      |                          |                            |          |                            |    |
| Foreign Patent Documents  |    |   |      |                          |                            |          |                            |    |
|   |    |   |      |                          |                            |          | Translation                |    |
|   |    | Document  | Date | Country                  | Class                      | Subclass | Yes                        | No |
|   | AL |   |      |                          |                            |          |                            |    |
|   | AM |   |      |                          |                            |          |                            |    |
|   | AN |   |      |                          |                            |          |                            |    |
|   | AO |   |      |                          |                            |          |                            |    |
|   | AP |   |      |                          |                            |          |                            |    |
| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)  |    |   |      |                          |                            |          |                            |    |
|    | AQ | Roberts et al., "The Photoluminescence of Erbium-doped Silicon Monoxide," Department of Electronics and Computer Science," 7 pages (June 1996).   |      |                          |                            |          |                            |    |
|    | AR | Schermmer, R. et al., "Investigation of Mesa Dielectric Waveguides," <i>Proceedings of the OSA Integrated Photonics Research Topical Meeting and Exhibit</i> , Paper No. TWB3 (June 11, 2001).<br><i>Figure 1 too dark to see details</i> |      |                          |                            |          |                            |    |
|    | AS | Shmlovich et al., "Recent progress in Erbium-doped waveguide amplifiers," Bell Laboratories, 3 pages (1999).  |      |                          |                            |          |                            |    |
| Examiner  |    | JOHN HOFFMAN  |      | Date Considered 2 - 2004 |                            |          |                            |    |
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|--|----|--|------|---------|-------|----------------------------|----------------------------|------------------|--|
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|  |    |  |      |         |       | M-11522 US                 |                            | Not assigned yet |  |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT  |    |  |      |         |       | Applicants                 |                            |                  |  |
| (Use several sheets if necessary)  |    |  |      |         |       | Demaray, Richard E. et al. |                            |                  |  |
|  |    |  |      |         |       | Filing Date                |                            | Group            |  |
|  |    |  |      |         |       | Herewith                   |                            | Not assigned yet |  |
| U.S. Patent Documents  |    |  |      |         |       |                            |                            |                  |  |
| *Examiner Initial  |    | Document Number  | Date | Name    | Class | Subclass                   | Filing Date If Appropriate |                  |  |
|  | AA |  |      |         |       |                            |                            |                  |  |
|  | AB |  |      |         |       |                            |                            |                  |  |
|  | AC |  |      |         |       |                            |                            |                  |  |
|  | AD |  |      |         |       |                            |                            |                  |  |
|  | AE |  |      |         |       |                            |                            |                  |  |
|  | AF |  |      |         |       |                            |                            |                  |  |
|  | AG |  |      |         |       |                            |                            |                  |  |
|  | AH |  |      |         |       |                            |                            |                  |  |
|  | AI |  |      |         |       |                            |                            |                  |  |
|  | AJ |  |      |         |       |                            |                            |                  |  |
|  | AK |  |      |         |       |                            |                            |                  |  |
| Foreign Patent Documents   |    |  |      |         |       |                            |                            |                  |  |
|  |    |  |      |         |       |                            | Translation                |                  |  |
|  |    | Document   | Date | Country | Class | Subclass                   | Yes                        | No               |  |
|  | AL |  |      |         |       |                            |                            |                  |  |
|  | AM |  |      |         |       |                            |                            |                  |  |
|  | AN |  |      |         |       |                            |                            |                  |  |
|  | AO |  |      |         |       |                            |                            |                  |  |
|  | AP |  |      |         |       |                            |                            |                  |  |
| OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)   |    |  |      |         |       |                            |                            |                  |  |
|   | AQ | Tervonen, A., "Challenges and opportunities for integrated optics in optical networks," Part of the SPIE Conference in Integrated Optics Devices III, SPIE Vol. 3620, pages 2-11 (January 1999). |      |         |       |                            |                            |                  |  |
|  | AR | Ting et al., "Study of planarized sputter-deposited SiO <sub>2</sub> ," <i>J. Vac. Sci. Technol.</i> , 15(3) pages 1105-1112 (May/June 1978).  |      |         |       |                            |                            |                  |  |
|  | AS |  |      |         |       |                            |                            |                  |  |
| Examiner   |    | Date Considered  |      |         |       |                            |                            |                  |  |
| JOHN HOFFMAN   |    | 2-2004   |      |         |       |                            |                            |                  |  |
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